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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHAND, ROBERTA A	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/631,941	LYU, DUG IN	
	Examiner	Art Unit	
	Roberta A. Shand	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-27* is/are rejected.

7)☒ Claim(s) *28-32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 12 provide for the use of chip signals through physical channels, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

3. Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 4, 11-13, 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kotzin (U.S. 6173005 B1).

6. Regarding claims 1, 11 and 20, Kotzin teaches (abstract) a method of transmitting physical channels, a downlink data transmits from a base station to at least a mobile station, comprising: determining a non-orthogonality among each downlink physical channel (col. 9, lines 50-67; differently deciding each transmission starting point of each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels (col. 10, lines 1-27 and fig. 6); and transmitting the downlink data through each physical channel having a different transmission starting point from the base station (col. 10, lines 28-67).

7. Regarding claims 3, 13 and 23, Kotzin teaches (abstract) a method of transmitting physical channels, comprising: determining a non-orthogonality among each downlink physical channel through a same frequency bandwidth (col. 9, lines 50-67); differently deciding each transmission starting point of each physical channel from the base station, if the non-orthogonality is determined to exist among the physical channels (col. 10, lines 1-27 and fig. 6); and transmitting the downlink data through each physical channel having a different transmission starting point (col. 10, lines 28-67).

8. Regarding claims 4, 21, 22 and 24, Kotzin teaches (fig. 3, col. 6, line 28 – 57) differently deciding each transmitter of the base station, chip transmission starting point of a plurality of physical channels using different scrambling codes with one another; and transmitting the downlink data through the physical channels at the differently decided chip transmission starting points.

9. Regarding claim 12, It is inherent in Ganesh's system which uses PN code offsets (phase shifts) that a mobile station checks all phase shifts and attempts to correlate them to a received input signal.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 5-8, 14-17, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin in view of Ganesh.

12. Regarding claims 5, 16, 26, Kotzin does no teach a time delay is determined by a value minimizing mutual interference to the plurality of physical channels scrambled with different scrambling codes.

13. Ganesh teaches (col. 10, lines 5-14) a time delay is determined by a value minimizing mutual interference to the plurality of physical channels scrambled with different scrambling codes. It would have been obvious to one of ordinary skill in the art to adapt this to Kotzin's system to ensure quality of service.

14. Regarding claim 6, Ganesh teaches (col. 11, lines 5-11) time delay of the transmission starting points is value equaling a power strength of the downlink data transmission through the physical channel.

15. Regarding claims 7 and 27, Ganesh teaches (col. 9, line 51 – col. 10, line 4) the time delay is shorter than the chip duration.

16. Regarding claim 8, it is an inherent property of chip speed that the chip duration is a reciprocal number of the chip rate.

17. Regarding claim 14, Ganesh teaches (col. 4, line 34 – col. 5, line 8) the channels are transmitted with the same frequency.

18. Regarding claim 15, and 17, Ganesh teaches (col. 9, line 51 – col. 10, line 4) the specific codes are scrambling codes and the starting time is the starting time of the chip transmission.

19. Regarding claim 25 Ganesh teaches (col. 9, line 51 – col. 10, line 4) the transmission offset between the channels is determined based on a number of scrambling codes.

20. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin in view of Ganesh and further in view of O (U.S. 6061338).

21. Regarding claims 9 and 18, Kotzin and Ganesh do not teach that the starting points of the first and second channels have time interval corresponding to half of the chip duration.

22. O teaches a CDMA system in which a spread code generator may shift the phase of a spread code by half a chip (col.6, lines 21-34). It would have been obvious to one of ordinary skill in the art to designate the phase shift of the scrambling codes in the system of Kotzin and Ganesh to be half chip duration to quickly correlate a mobile station to the proper scrambling code.

23. Claims 10 and 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin in view Ganesh and further in view of McDonough (U.S. 6519237).

24. Regarding claims 10, 19, Kotzin and Ganesh do not explicitly teach the time delay is determined by a reciprocal number value of the number of the physical channels scrambled with different scrambling codes.

25. McDonough teaches a cellular diagram of PN code phase shifts that shows 512 possible phase shifts (fig. 1a). The phase shift between each PN code is starting point 64 bits, therefore the phase shifts are equally spaced (col. 2, lines 13-33). Since the phase shifts are equally spaced, the time interval of the phase shift must be equal to the reciprocal of the number of phase shifts representing different scrambling codes. It would have been obvious to one of ordinary skill in the art to equally space phase shifts in time for each of the scrambling codes used in Kotzin and Ganesh's invention to reduce interference among scrambling codes evenly within the cell.

Allowable Subject Matter

26. Claims 28-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Roberta A Shand
Examiner
Art Unit 2665

STEVEN NGUYEN
PRIMARY EXAMINER